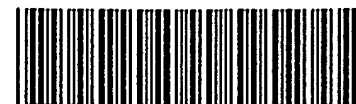


## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/535,441  
Source: P47/10  
Date Processed by STIC: 5/27/05

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PCT

## RAW SEQUENCE LISTING

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:40

Input Set : A:\X16700B\_US seq list revised Natl 12May2005.ST25.txt

Output Set: N:\CRF4\05272005\J535441.raw

3 <110> APPLICANT: Watkins, Jeffry Dean  
 4 Pancook, James David  
 6 <120> TITLE OF INVENTION: Butyrylcholinesterase Variants That Alter the Activity of  
 7 Chemotherapeutic Agents  
 9 <130> FILE REFERENCE: X16700  
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/535,441  
 C--> 12 <141> CURRENT FILING DATE: 2005-05-19  
 14 <150> PRIOR APPLICATION NUMBER: US 10/310,666  
 15 <151> PRIOR FILING DATE: 2002-12-04  
 17 <150> PRIOR APPLICATION NUMBER: US 60/509,072  
 18 <151> PRIOR FILING DATE: 2002-12-04  
 20 <160> NUMBER OF SEQ ID NOS: 201  
 22 <170> SOFTWARE: PatentIn version 3.3  
 24 <210> SEQ ID NO: 1  
 25 <211> LENGTH: 1722  
 26 <212> TYPE: DNA  
 27 <213> ORGANISM: Artificial  
 29 <220> FEATURE:  
 30 <223> OTHER INFORMATION: Synthetic butyrylcholinesterase variant  
 32 <400> SEQUENCE: 1

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 35 tttggtggca cggtaacagc ctttcttgga attccctatg cacagccacc tcttggtaga 120  
 37 cttcgattca aaaagccaca gtctctgacc aagtgggtctg atatttgga tgccacaaaa 180  
 39 tatgcaaatt cttgctgtca gaacatagat caaagttttc caggcttcca tggatcagag 240  
 41 atgtggaacc caaacactga cctcagtga gactgtttat atctaaatgt atggattcca 300  
 43 gcacctaaac caaaaaatgc cactgtattg atatggattt atggtggttg ttttcaaact 360  
 45 ggaacatcat ctttacctgt ttatgatggc aagtttcttg ctcgggttgga aagagttatt 420  
 47 gtagtgtcaa tgaactatag ggtgggtgcc ctaggattct tagctttgcc aggaaatcct 480  
 49 gaggtccag ggaacatggg tttatttgat caacagttgg ctcttcagtg ggttcaaaaa 540  
 51 aatatagcag cctttggtgg aaatcctaaa agtgtaactc tctttggaga aagtgcagga 600  
 53 gcagcttcag ttagcctgca tttgctttct cctggaagcc attcattgtt caccagagcc 660  
 55 attctgcaaa gtggttcgcg kaatgctcct tgggcggtaa catctcttta tgaagctagg 720  
 57 aacagaacgt tgaacttagc taaattgact ggttgctcta gagagaatga gactgaaata 780  
 59 atcaagtgtc ttagaaataa agatcccca gaaattcttc tgaatgaagc atttgtgtgc 840  
 61 ccctatggga ctctttgtc agtaaacctt ggtccgaccg tggatggtga tttctcact 900  
 63 gacatgccag acatattact tgaacttgga caatttaaaa aaaccagat tttggtgggt 960  
 65 gttaataaag atgaaggac agctttttta gtctatggtg ctcttggtt cagcaaagat 1020  
 67 aacaatagta tcataactag aaaagaattt caggaagggt taaaaatatt tttccagga 1080  
 69 gtgagtgagt ttggaaagga atccatcctt tttcattaca cagactgggt agatgatcag 1140  
 71 agacctgaaa actaccgtga ggccttgggt gatgttggtg gggattataa tttcatatgc 1200  
 73 cctgccttgg agttcaccaa gaagtctca gaatggggaa ataatgcctt tttctactat 1260  
 75 tttgaacacc gatcctcaa acttccgtgg ccagaatgga tgggagtgat gcatggctat 1320  
 77 gaaattgaat ttgtctttgg tttacctctg gaaagaagag ataattacac aaaagccgag 1380

pp 6-7

## RAW SEQUENCE LISTING

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:40

Input Set : A:\X16700B\_US seq list revised Natl 12May2005.ST25.txt

Output Set: N:\CRF4\05272005\J535441.raw

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79 gaaattttga gtagatccat agtgaaaacgg tgggcaaatt ttgcaaaaata tggggaatcca 1440
81 aatgagactc agaacaatag cacaagctgg cctgtcttca aaagcactga acaaaaaatat 1500
83 ctaaccttga atacagagtc aacaagaata atgacgaaac tacgtgctca acaatgtcga 1560
85 ttctggacat cattttttcc aaaagtcttg gaaatgacag gaaatattga tgaagcagaa 1620
87 tgggagtgga aagcaggatt ccatcgctgg aacaattaca tgatggactg gaaaaatcaa 1680
89 tttaacgatt aactagcaa gaaagaaagt tgtgtgggtc tc 1722

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92 &lt;210&gt; SEQ ID NO: 2

93 &lt;211&gt; LENGTH: 574

94 &lt;212&gt; TYPE: PRT

95 &lt;213&gt; ORGANISM: Artificial

97 &lt;220&gt; FEATURE:

98 &lt;223&gt; OTHER INFORMATION: Synthetic butyrylcholinesterase variant

101 &lt;220&gt; FEATURE:

102 &lt;221&gt; NAME/KEY: VARIANT

103 &lt;222&gt; LOCATION: (227)..(227)

104 &lt;223&gt; OTHER INFORMATION: Xaa = Ala

106 &lt;400&gt; SEQUENCE: 2

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108 Glu Asp Asp Ile Ile Ile Ala Thr Lys Asn Gly Lys Val Arg Gly Met
109 1 5 10 15
112 Asn Leu Thr Val Phe Gly Gly Thr Val Thr Ala Phe Leu Gly Ile Pro
113 20 25 30
116 Tyr Ala Gln Pro Pro Leu Gly Arg Leu Arg Phe Lys Lys Pro Gln Ser
117 35 40 45
120 Leu Thr Lys Trp Ser Asp Ile Trp Asn Ala Thr Lys Tyr Ala Asn Ser
121 50 55 60
124 Cys Cys Gln Asn Ile Asp Gln Ser Phe Pro Gly Phe His Gly Ser Glu
125 65 70 75 80
128 Met Trp Asn Pro Asn Thr Asp Leu Ser Glu Asp Cys Leu Tyr Leu Asn
129 85 90 95
132 Val Trp Ile Pro Ala Pro Lys Pro Lys Asn Ala Thr Val Leu Ile Trp
133 100 105 110
136 Ile Tyr Gly Gly Gly Phe Gln Thr Gly Thr Ser Ser Leu His Val Tyr
137 115 120 125
140 Asp Gly Lys Phe Leu Ala Arg Val Glu Arg Val Ile Val Val Ser Met
141 130 135 140
144 Asn Tyr Arg Val Gly Ala Leu Gly Phe Leu Ala Leu Pro Gly Asn Pro
145 145 150 155 160
148 Glu Ala Pro Gly Asn Met Gly Leu Phe Asp Gln Gln Leu Ala Leu Gln
149 165 170 175
152 Trp Val Gln Lys Asn Ile Ala Ala Phe Gly Gly Asn Pro Lys Ser Val
153 180 185 190
156 Thr Leu Phe Gly Glu Ser Ala Gly Ala Ala Ser Val Ser Leu His Leu
157 195 200 205
160 Leu Ser Pro Gly Ser His Ser Leu Phe Thr Arg Ala Ile Leu Gln Ser
161 210 215 220
W--> 164 Gly Ser Xaa Asn Ala Pro Trp Ala Val Thr Ser Leu Tyr Glu Ala Arg
165 225 230 235 240
168 Asn Arg Thr Leu Asn Leu Ala Lys Leu Thr Gly Cys Ser Arg Glu Asn
169 245 250 255

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## RAW SEQUENCE LISTING

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:40

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Output Set: N:\CRF4\05272005\J535441.raw

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173          260          265          270
176 Leu Leu Asn Glu Ala Phe Val Val Pro Tyr Gly Thr Pro Leu Ser Val
177          275          280          285
180 Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr Asp Met Pro Asp
181          290          295          300
184 Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val Gly
185 305          310          315          320
188 Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Val Tyr Gly Ala Pro Gly
189          325          330          335
192 Phe Ser Lys Asp Asn Asn Ser Ile Ile Thr Arg Lys Glu Phe Gln Glu
193          340          345          350
196 Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe Gly Lys Glu Ser
197          355          360          365
200 Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn
201          370          375          380
204 Tyr Arg Glu Ala Leu Gly Asp Val Val Gly Asp Tyr Asn Phe Ile Cys
205 385          390          395          400
208 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala
209          405          410          415
212 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu
213          420          425          430
216 Trp Met Gly Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu
217          435          440          445
220 Pro Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser
221          450          455          460
224 Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro
225 465          470          475          480
228 Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr
229          485          490          495
232 Glu Gln Lys Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg Ile Met Thr
233          500          505          510
236 Lys Leu Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser Phe Phe Pro Lys
237          515          520          525
240 Val Leu Glu Met Thr Gly Asn Ile Asp Glu Ala Glu Trp Glu Trp Lys
241          530          535          540
244 Ala Gly Phe His Arg Trp Asn Asn Tyr Met Met Asp Trp Lys Asn Gln
245 545          550          555          560
248 Phe Asn Asp Tyr Thr Ser Lys Lys Glu Ser Cys Val Gly Leu
249          565          570
252 <210> SEQ ID NO: 3
253 <211> LENGTH: 1722
254 <212> TYPE: DNA
255 <213> ORGANISM: Artificial
257 <220> FEATURE:
258 <223> OTHER INFORMATION: Synthetic butyrylcholinesterase variant
260 <400> SEQUENCE: 3
261 gaagatgaca tcataattgc aacaaagaat ggaaaagtca gagggatgaa cttgacagtt      60
263 tttggtggca cggtaacagc ctttcttggga attccctatg cacagccacc tcttggtaga      120

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## RAW SEQUENCE LISTING

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:40

Input Set : A:\X16700B\_US seq list revised Natl 12May2005.ST25.txt

Output Set: N:\CRF4\05272005\J535441.raw

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265 cttcgattca aaaagccaca gtctctgacc aagtgggtctg atattttggaa tgccacaaaa 180
267 tatgcaaatt cttgctgtca gaacatagat caaagttttc caggcttcca tggatcagag 240
269 atgtggaacc caaacactga cctcagtga gactgtttat atctaaatgt atggattcca 300
271 gcacctaaac caaaaaatgc cactgtattg atatggattt atggtgggtg ttttcaaact 360
273 ggaacatcat ctttacatgt ttatgatggc aagtttctgg ctcggttga aagagttatt 420
275 gtagtgtaaa tgaactatag ggtgggtgcc ctaggattct tagctttgcc aggaaatcct 480
277 gaggtccag ggaacatggg tttatttgat caacagttgg ctcttcagtg ggttcaaaaa 540
279 aatatagcag ctttgggtgg aaatcctaaa agtgttaactc tctttggaga aagtgcagga 600
281 gcagcttcag ttagcctgca tttgctttct cctggaagcc attcattgtt caccagagcc 660
283 attctgcaaa gtggttccgc kaatgctcct tgggcggtaa catctcttta tgaagctagg 720
285 aacagaacgt tgaacttagc taaattgact ggttgctcta gagagaatga gactgaaata 780
287 atcaagtgtc ttagaaataa agatcccaa gaaattcttc tgaatgaagc atttgttgct 840
289 ccctatgggg ckctttgtc agtaaaactt ggtccgaccg tggatggtga ttttctcact 900
291 gacatgccag acatattact tgaacttgga caatttaaaa aaaccagat tttggtgggt 960
293 gttaataaag atgaagggac agctttttta gtctatggtg ctctgggtt cagcaaagat 1020
295 aacaatagta tcataactag aaaagaattt caggaagggt taaaaatatt tttccagga 1080
297 gtgagtgaat ttggaaagga atccatcctt tttcattaca cagactgggt agatgatcag 1140
299 agacctgaaa actaccgtga ggccttgggt gatgtgttg gggattataa tttcatatgc 1200
301 cctgccttgg agttcaccaa gaagttctca gaatggggaa ataatgcctt tttctactat 1260
303 tttgaacacc gatcctcaa acttccgtgg ccagaatgga tgggagtga gcatggctat 1320
305 gaaattgaat ttgtctttgg tttacctctg gaaagaagag ataattacac aaaagccgag 1380
307 gaaattttga gtagatccat agtgaaacgg tgggcaaatt ttgcaaata tgggaatcca 1440
309 aatgagactc agaacaatag cacaagctgg cctgtcttca aaagcactga acaaaaatat 1500
311 ctaaccttga atacagagtc aacaagaata atgacgaaac tacgtgctca acaatgtcga 1560
313 ttctggacat cattttttcc aaaagtcttg gaaatgacag gaaatattga tgaagcagaa 1620
315 tgggagtgga aagcaggatt ccatcgctgg aacaattaca tgatggactg gaaaaatcaa 1680
317 tttaacgatt acactagcaa gaaagaaagt tgtgtgggtc tc 1722

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320 &lt;210&gt; SEQ ID NO: 4

321 &lt;211&gt; LENGTH: 574

322 &lt;212&gt; TYPE: PRT

323 &lt;213&gt; ORGANISM: Artificial

325 &lt;220&gt; FEATURE:

326 &lt;223&gt; OTHER INFORMATION: Synthetic butyrylcholinesterase variant

329 &lt;220&gt; FEATURE:

330 &lt;221&gt; NAME/KEY: VARIANT

331 &lt;222&gt; LOCATION: (227)..(227)

332 &lt;223&gt; OTHER INFORMATION: Xaa = Ala

334 &lt;220&gt; FEATURE:

335 &lt;221&gt; NAME/KEY: VARIANT

336 &lt;222&gt; LOCATION: (284)..(284)

337 &lt;223&gt; OTHER INFORMATION: Xaa = Ala

339 &lt;400&gt; SEQUENCE: 4

341 Glu Asp Asp Ile Ile Ile Ala Thr Lys Asn Gly Lys Val Arg Gly Met

342 1 5 10 15

345 Asn Leu Thr Val Phe Gly Gly Thr Val Thr Ala Phe Leu Gly Ile Pro

346 20 25 30

349 Tyr Ala Gln Pro Pro Leu Gly Arg Leu Arg Phe Lys Lys Pro Gln Ser

350 35 40 45

353 Leu Thr Lys Trp Ser Asp Ile Trp Asn Ala Thr Lys Tyr Ala Asn Ser

## RAW SEQUENCE LISTING

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:40

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Output Set: N:\CRF4\05272005\J535441.raw

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357 Cys Cys Gln Asn Ile Asp Gln Ser Phe Pro Gly Phe His Gly Ser Glu
358 65      70      75      80
361 Met Trp Asn Pro Asn Thr Asp Leu Ser Glu Asp Cys Leu Tyr Leu Asn
362      85      90      95
365 Val Trp Ile Pro Ala Pro Lys Pro Lys Asn Ala Thr Val Leu Ile Trp
366      100      105      110
369 Ile Tyr Gly Gly Gly Phe Gln Thr Gly Thr Ser Ser Leu His Val Tyr
370      115      120      125
373 Asp Gly Lys Phe Leu Ala Arg Val Glu Arg Val Ile Val Val Ser Met
374      130      135      140
377 Asn Tyr Arg Val Gly Ala Leu Gly Phe Leu Ala Leu Pro Gly Asn Pro
378 145      150      155      160
381 Glu Ala Pro Gly Asn Met Gly Leu Phe Asp Gln Gln Leu Ala Leu Gln
382      165      170      175
385 Trp Val Gln Lys Asn Ile Ala Ala Phe Gly Gly Asn Pro Lys Ser Val
386      180      185      190
389 Thr Leu Phe Gly Glu Ser Ala Gly Ala Ala Ser Val Ser Leu His Leu
390      195      200      205
393 Leu Ser Pro Gly Ser His Ser Leu Phe Thr Arg Ala Ile Leu Gln Ser
394      210      215      220
W--> 397 Gly Ser Xaa Asn Ala Pro Trp Ala Val Thr Ser Leu Tyr Glu Ala Arg
398 225      230      235      240
401 Asn Arg Thr Leu Asn Leu Ala Lys Leu Thr Gly Cys Ser Arg Glu Asn
402      245      250      255
405 Glu Thr Glu Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln Glu Ile
406      260      265      270
409 Leu Leu Asn Glu Ala Phe Val Val Pro Tyr Gly Xaa Pro Leu Ser Val
410      275      280      285
413 Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr Asp Met Pro Asp
414      290      295      300
417 Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val Gly
418 305      310      315      320
421 Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Val Tyr Gly Ala Pro Gly
422      325      330      335
425 Phe Ser Lys Asp Asn Asn Ser Ile Ile Thr Arg Lys Glu Phe Gln Glu
426      340      345      350
429 Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe Gly Lys Glu Ser
430      355      360      365
433 Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp Gln Arg Pro Glu Asn
434      370      375      380
437 Tyr Arg Glu Ala Leu Gly Asp Val Val Gly Asp Tyr Asn Phe Ile Cys
438 385      390      395      400
441 Pro Ala Leu Glu Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala
442      405      410      415
445 Phe Phe Tyr Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu
446      420      425      430
449 Trp Met Gly Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu
450      435      440      445

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/535,441

DATE: 05/27/2005  
TIME: 11:26:41

Input Set : A:\X16700B\_US seq list revised Natl 12May2005.ST25.txt  
Output Set: N:\CRF4\05272005\J535441.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. 227  
Seq#:4; Xaa Pos. 227, 284  
Seq#:6; Xaa Pos. 227  
Seq#:8; Xaa Pos. 227  
Seq#:10; Xaa Pos. 227  
Seq#:14; Xaa Pos. 287  
Seq#:24; Xaa Pos. 227  
Seq#:26; Xaa Pos. 227  
Seq#:28; Xaa Pos. 227  
Seq#:30; Xaa Pos. 227  
Seq#:32; Xaa Pos. 227  
Seq#:34; Xaa Pos. 227  
Seq#:36; Xaa Pos. 227  
Seq#:38; Xaa Pos. 227  
Seq#:40; Xaa Pos. 227  
Seq#:42; Xaa Pos. 227  
Seq#:44; Xaa Pos. 227  
Seq#:46; Xaa Pos. 227  
Seq#:48; Xaa Pos. 227  
Seq#:50; Xaa Pos. 227  
Seq#:52; Xaa Pos. 227  
Seq#:54; Xaa Pos. 227  
Seq#:56; Xaa Pos. 227  
Seq#:58; Xaa Pos. 227  
Seq#:60; Xaa Pos. 227  
Seq#:62; Xaa Pos. 227  
Seq#:64; Xaa Pos. 227  
Seq#:66; Xaa Pos. 227  
Seq#:68; Xaa Pos. 227  
Seq#:70; Xaa Pos. 227  
Seq#:72; Xaa Pos. 227  
Seq#:74; Xaa Pos. 227  
Seq#:76; Xaa Pos. 227  
Seq#:78; Xaa Pos. 227  
Seq#:80; Xaa Pos. 227  
Seq#:82; Xaa Pos. 227  
Seq#:84; Xaa Pos. 227  
Seq#:86; Xaa Pos. 227  
Seq#:88; Xaa Pos. 227  
Seq#:90; Xaa Pos. 227  
Seq#:92; Xaa Pos. 227  
Seq#:94; Xaa Pos. 227  
Seq#:96; Xaa Pos. 227  
Seq#:98; Xaa Pos. 227

## RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:41

Input Set : A:\X16700B\_US seq list revised Natl 12May2005.ST25.txt

Output Set: N:\CRF4\05272005\J535441.raw

Seq#:100; Xaa Pos. 227

Seq#:102; Xaa Pos. 227

Seq#:104; Xaa Pos. 227

Seq#:106; Xaa Pos. 227

Seq#:108; Xaa Pos. 227

Seq#:110; Xaa Pos. 227

Seq#:112; Xaa Pos. 227

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,19,20,23,24,25,26,27,28,29,30,31

Seq#:32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55

Seq#:56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79

Seq#:80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102

Seq#:103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120

Seq#:121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138

Seq#:139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156

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## VERIFICATION SUMMARY

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:41

Input Set : A:\X16700B\_US seq list revised Natl 12May2005.ST25.txt

Output Set: N:\CRF4\05272005\J535441.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:224  
L:397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:224  
M:341 Repeated in SeqNo=4  
L:630 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:224  
L:863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:224  
L:1096 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:224  
L:1574 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:272  
L:2686 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:224  
L:2919 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:224  
L:3152 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:224  
L:3385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:224  
L:3618 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:224  
L:3851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:224  
L:4084 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:224  
L:4317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:224  
L:4550 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:224  
L:4783 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:224  
L:5016 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:224  
L:5249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:224  
L:5482 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:224  
L:5715 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:224  
L:5948 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:224  
L:6181 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:224  
L:6414 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:224  
L:6647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58 after pos.:224  
L:6880 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:224  
L:7113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:62 after pos.:224  
L:7346 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64 after pos.:224  
L:7579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:224  
L:7812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:68 after pos.:224  
L:8045 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:224  
L:8278 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:224  
L:8511 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74 after pos.:224  
L:8744 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:224  
L:8977 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78 after pos.:224  
L:9210 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:224  
L:9443 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:224  
L:9676 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:224  
L:9909 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:224  
L:10142 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88 after pos.:224  
L:10375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:224  
L:10608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92 after pos.:224  
L:10841 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94 after pos.:224  
L:11074 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96 after pos.:224  
L:11307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:98 after pos.:224  
L:11540 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:100 after pos.:224

## VERIFICATION SUMMARY

DATE: 05/27/2005

PATENT APPLICATION: US/10/535,441

TIME: 11:26:41

Input Set : A:\X16700B\_US seq list revised Natl 12May2005.ST25.txt

Output Set: N:\CRF4\05272005\J535441.raw

L:11773 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102 after pos.:224  
L:12006 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104 after pos.:224  
L:12239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106 after pos.:224  
L:12472 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108 after pos.:224